

## **METHOD FOR FABRICATING SEMICONDUCTOR DEVICE USING A NICKEL SALICIDE PROCESS**

### **ABSTRACT OF THE DISCLOSURE**

5        A method for fabricating a semiconductor device is provided using a nickel salicide process. The method includes forming a gate pattern and a source/drain region on a silicon substrate, forming a Ni-based metal layer for silicide on the silicon substrate where the gate pattern and the source/drain region are formed, and forming an N-rich titanium nitride layer on the Ni-based metal layer for silicide. Next, a thermal treatment is applied to the silicon substrate where the Ni-based metal layer for silicide and the N-rich titanium nitride layer are formed, thereby forming a nickel silicide on each of the gate pattern and the source/drain region. Then, the Ni-based metal layer for silicide and the N-rich titanium nitride layer are selectively removed to expose a top portion of a nickel silicide layer formed on the gate pattern and the source/drain region.

10      Thus, as the N-rich titanium nitride layer is formed on the Ni-based metal layer for silicide, a silicide residue is prevented from forming a spacer and a field region formed of a field oxide layer.

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